RADAR Installed in R.A.N. Ships

By Hawse Pipe

Some of the performance figures are close approximations

ID Number: 79
Manufactured in: UK
Introduced to service August 1938
Primary Function: Long range air warning. Maximum distance 60 nautical miles.
Operating Frequency:
Ships in Which Installed:
Type of Antenna:
Type of Display:
General Comments:

ID Number: 262
Manufactured in: UK
Primary Function: Gunnery close range. Anti aircraft
Operating Frequency: 10,000 MHz
Ships in Which Installed: Quadrant. Sydney (AC)
Type of Antenna: Rorating disc, 1 ½ degrees off centre, conical scanning waveguide fed
Type of Display:
General Comments: Fitted to STAAG and CRBFD mounts

ID Number: 271
Manufactured in: UK
Primary Function: Surface warning
Operating Frequency: 3,000 MHz
Ships in Which Installed: Adelaide. Canberra.
Type of Antenna: Dual flat cheese half eliptical. Magnetron antenna mounted. 370 degree rotation only. Housed in a plastic lantern.
Type of Display: Initally “A” scan (prior to PPI development)
General Comments: Sea trials showed good results at 26,000 yards from a destroyer, and 40,000 yards from a cruiser.

ID Number: A272
Manufactured in: Australia
Primary Function: Surface warning of submarines and small craft. Limited to maximum 4 NM
Operating Frequency: 3,000 MHz
Ships in Which Installed: All Australian built Bathurst Class Minesweepers (Corvettes)
Type of Antenna: dual flat cheesehalf eliptical. Magnetron mounted in the antenna. 370 degree rotation only. Covered by a timber lantern. Antenna was hand driven via gearing
General Comments: First Australian magnetron fitted set

ID Number: 273
Manufactured in: UK
Primary Function: surface warning
Operating Frequency: 3,000 MHz
Ships in Which Installed:
Type of Antenna: Double cheese. Receiver above, transmitter below. Magnetron mounted on the antenna
Type of Display:
General Comments:

ID Number: 275
Manufactured in: UK
Primary function: Gunnery control, high andlow angle
Operating frequency: 3,000 MHz
Ships in which installed: Tobruk
Type of Antenna: Two nacelles, transmitter starboard side, receiver port side.
Type of Display:
General Comments: Was part of the Flyplane Predictor System

ID Number: A276
Manufactured in: Australia
Primary Function: Surface warning
Operating Frequency: 3,000 MHz
Ships in Which Installed: BathurstClass Minesweepers (Corvettes). Yandra.
Type of Antenna: Parabolic single dish, continuous rotation. 10 RPM in either direction. 80 degree sector sweep
Type of Display: PPI
General Comments:

ID Number: 277F
Manufactured in: UK
Primary Function: Surface warning and air warning
Operating Frequency: 3,000 MHz
Ships in Which Installed: Sydney (AC). Quadrant.
Type of Antenna: AUK & ANU. AUK was approx 1.35 metres in diameter. Initially circular and later parabolic dish, each being waveguide fed. The Antenna could be elevated for aircraft slant height ranging
Type of Display: HPI design B. As well, a 3 range and a 4 range unit
General Comments: Peak power was 500 Kw at a PRF of 500 Hz and with a 1.9 µsec pulse width. Antenna beam width was 4.5º by 4.5º. Maximum range160 NM. IF amplifier was 5 stages at 60 MHz. IF amplifier output was fed to a single valve detector followed by an output valve operating as a cathode follower delivering the video output. Thermionic valves were 6 CV1091 and 1 CV 1092.

ID Number: A286
Manufactured in: Australia
Primary Function: Night warning of surface craft up to 6 nautical miles. Would detect aircraft up to 86 NM depending upon aircraft altitude.
Operating Frequency: 176 MHz.

Ships in Which Installed: Australia. Perth. Arunta. Warramunga. Napier. Nestor. Nizam. Norman. Quadrant. Queenborough. All Australian built Bathurst Class Minesweepers (Corvettes). Warrego
Type of Antenna: 286M fixed antenna. 286P rotating antennna. Horizontal dipoles with a bedstead reflector. Early sets used a bowden cable device for 370 degrees rotation.
Type of Display
General Comments

ID Number: A290
Manufactured in: Australia
Primary Function: Surface warning. Also used for aircraft gunnery control
Operating Frequency: 200 MHz.
Ships in Which Installed: Adelaide. Canberra. Kanimbla. Manoora. Westralia. Napal. Quality. Quiberon. Quickmatch. Stuart. Vampire. Vendetta. Voyager.
Type of Antenna: Yagi array with 4 directors and 3 reflectors
Type of Display
General Comments

ID Number: 293
Manufactured in: UK
Primary Function: Combined air and surface warning
Operating Frequency: 3,000 MHz
Ships in Which Installed: Tobruk. Quadrant. Sydney (AC).
Type of Antenna: Tilted cheese, waveguide fed, continuous rotation
Type of Display:
General Comments: Became the main combined air and surface warning equipment.

ID number: 960
Manufactured in: UK
Primary Function: Air warning
Operating Frequency: 80/90 MHz
Ships in which Installed: Sydney (AC).
Type of Antenna: Horizontal dipoles in grid array, continuous rotation.
Type of Display:
General Comments:

ID Number: 974
Manufactured in: UK
Primary Function: High deinition surface warning
Operating Frequency: 10,000 MHz
Ships in Which Installed: Quadrant
Type of Antenna: Dual cheese waveguide fed continuous rotation
Type of Display:
General Comments:

ID number: 984
Manufactured in: UK
Primary Function: Combined air and surface warning

Operating Frequency: 10,000 MHz
Ships in Which Installed: Sydney (AC)
Type of Antenna: Dual cheese waveguide fed.
Type of Display:
General Comments:

ID Number: SC4, Sugar Charlie
Manufactured in: USA
Primary Function: Air warning
Operating Frequency:
Ships in Which Installed: Bataan
Type of Antenna:
Type of Display:
General Comments:

ID Number: SG. Sugar George
Manufactured in: USA
Primary Function: Surface warning
Operating Frequency: 3,000 MHz
Ships in Which Installed
Type of Antenna: Parabolic single antenna waveguide fed. Motorised rotation. Stabilised in azimuth
Type of Display: PPI
General Comments